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August 16, 1984  
EF2-72758

Director of Nuclear Reactor Regulation  
Attention: Mr. B. J. Youngblood, Chief  
Licensing Branch No.1  
Division of Licensing  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Dear Mr. Youngblood:

- Reference: (1) Fermi 2  
NRC Docket No. 50-341
- (2) Safety Evaluation Report for Fermi 2,  
Supplement 3, (SSER 3), NUREG-0798,  
January, 1983
- (3) Detroit Edison to NRC Letter, "Estimation of  
Core Damage Procedure", EF2-57547,  
April 24, 1982.

Subject: Procedure for Estimating Core Damage

Detroit Edison provided a copy of its proposed procedure for estimating core damage in Reference (3). This procedure was subsequently evaluated by the NRC and reported in Reference (2). In order to resolve the open items from Reference (2), Edison is providing in Attachment 2 to this letter a revised copy of the Fermi 2 Radiation Chemistry Procedure 78.000.15, "Determination of Extent of Core Damage", for your review. This revised procedure will support the deletion of the license condition proposed in Section 22, Item II.B.3 of Reference 2.

A review of the open items identified in Section 22, Item II.B.3 of Reference 2 and the Edison position on each is provided in Attachment 1. This discussion should allow closure of the remaining open items pending from Reference 2 on this issue.

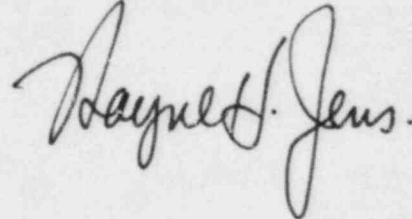
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If you have any questions, please contact Mr. Keener Earle  
at (313) 586-4211.

Sincerely,

A handwritten signature in cursive script, appearing to read "Raymond H. Jones".

cc: Mr. P. M. Byron\*  
Mr. M. D. Lynch\*  
Mr. F. Witt\*  
USNRC, Document Control Desk\*  
Washington, D.C. 20555

\* With attachments

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bcc: F. E. Agosti\*  
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Approval Control\*

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M. S. Rager\*  
NRR Cron File\*

\* With Attachments

Attachment 1: Edison Response to SSER 3 Open Item

SSER 3: Section 6.8.4 c of the Standard Technical Specifications requires a post-accident sampling system testing and operator training program. This program is to be performed on a semi-annual basis and consists of obtaining and analyzing reactor coolant, suppression pool, and RHR samples chemically and radiochemically by persons responsible for post accident procedures. The post accident sample results are used by designated responsible individuals to estimate core damage, using the procedure approved in this evaluation. Any discrepancies found in these training exercises need to be corrected in a revised procedure.

Edison Position:

Edison has committed to perform the semiannual testing of the PASS including, as a minimum, the scope delineated above. Radiation Chemistry Procedure 71.000.03, "Sampling and Analysis Schedule", is being revised where necessary to specifically delineate the above requirements.

SSER 3: The procedure provides means to differentiate between cladding failures and core melt and the degree of each type of core damages. The revised procedure should also factor in a third core damage category that is in between cladding failure and core melt--namely, fuel overheating (metal-water reaction).

Edison Position:

As reflected in Section 2.0 of Attachment 2, the procedure now addresses a total of ten (10) possible damage assessment categories (including fuel overheating).

SSER 3: The procedure relies entirely on radiochemical analysis to estimate core damage. To obtain more realistic core damage estimates, the revised procedure should factor in other plant indicators (e.g., reactor water level, hydrogen generation from zirconium-water reaction, containment monitors). The plant indicators should help in the interpretation of the extent of core damage. The plant indicators will also cross check whether sampling is representative or sample analysis are reasonable.

Edison Position:

As reflected in Attachment 2, plant parameters such as reactor water level, containment hydrogen concentration and radiation levels are to be used as an integral part of the core damage assessment methodology.